**K-5 Math Lesson Plan**

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| **Teacher:Falkener** | | | **Grade: 5** | | | **Date(s)**: August 2012 |
| **Unit Title: Unit-1**  Understand the Decimal Place Value System | | | | **Corresponding Unit Task:**  Decimal Distractions  ***(Day #2, of Task 2)*** | | |
| **Essential Question(s): “**How do I read, write, and use decimals to the thousandths place using standard form  (base 10 numerals), word form (number name), and expanded form” | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher:**  Base ten Blocks  Vocabulary word cards  Chart paper/markers  Timers/stopwatches  White board, markers  paper | | **Student:**  Math journals  pencils,  paper, graph paper,  Base ten blocks | | | Thousands, hundreds,  tens, ones, tenths,  hundredths, thousandths,  standard form (base ten numeral) ,  expanded form,  word form (number name). | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  √ 1. Make sense of problems and persevere in solving them.  √ 2. Reason abstractly and quantitatively.  √ 3. Construct viable arguments and critique the reasoning of others.  √ 4. Model with mathematics.  √ 5. Use appropriate tools strategically.  √ 6. Attend to precision.  √ 7. Look for and make use of structure.  √ 8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  5.NBT.3a **Read, Write, and compare decimals to thousandths**  **Read** and **write** decimals to thousandths using base-ten numerals, number names, and expanded form, e.g.  347.392= 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000). | | | | | |
| **I Can Statement(s**): I can read decimals to the thousandths using base ten numerals.  I can read decimals to the thousandths using number names.  I can read decimals to the thousandths using expanded form.  I can write decimals to the thousandths using base ten numerals.  I can write decimals to the thousandths using number names.  I can write decimals to the thousandths using expanded form**.** | | | | | |
| **Activating Strategy/Hook:** (5 Mins.)  The teacher will write the following prompt on the board:  WE NEED YOUR HELP! We are trying to report the results from the 2012 London Olympics around the world. Different media outlets want the data displayed in different forms. Please assist us in resolving this issue.  100 Meter Race: 5.452 1st place  NBC News wants: **Expanded Form** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  ABC News wants: **Standard Form** (Base 10 Numeral)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  CBS News wants: **Word Form** (Number Name) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  FOX News wants: **Visual Representation** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Teacher will review answers in whole group during *teacher directed instruction*. | | | | | |
| **Teacher Directed:** The teacher will review vocabulary using flash cards and visual representations. (Models will be used to represent place value vocabulary) Review the activating strategy activity as a whole group. Using the same scenario, the teacher will model how to display the value 4.321 using base 10 blocks, expanded form, standard form (base 10 numeral), and word form (number name). The teacher will instruct students to verbalize the value of each digit in a decimal number to emphasize understanding of the place value system.  Reminder: teacher should also review the two structures of expanded form that could be displayed. (using decimals or fractions)  **Example**: (4 x 1) + (2 x 0.1) + (3 x 0.01) + (5 x ) 0.001)= 4.235  or 4 x 1 + 2 x (1/10) + 3 x (1/100) + 5 x (1/1000)=4.235 | | | | | |
| **Guided Practice:**  Students will be placed in cooperative learning groups representing the news companies from the *activating strategy* above. Each group will be given a stop watch and chart paper, and marker. The following roles will be assigned in each group; news- anchor, sprinter 1, sprinter 2, sprinter 3. The news anchor will be responsible for timing sprinters and recording their times within the chart during races. (Races can occur within the classroom or outside upon teachers discretion.) Each sprinter’s running time will be used as data (standard form/ base ten numeral) for the practice activity. Once times have been recorded, students will rotate thru the 4 different “forms”, giving each student opportunity to practice each type, and complete their chart. ( See Chart Below)  Completed charts from each group will be displayed, reviewed, and discussed- in whole group.  \_\_\_\_\_\_\_\_ **News Company**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Sprinter#** | **Expanded form** | **Word form** (Number Name) | **Standard form** (Base Ten Numeral) | **Picture form** | | **Sprinter 1** |  |  |  |  | | **Sprinter 2** |  |  |  |  | | **Sprinter 3** |  |  |  |  | | | | | | |
| **Independent Practice:**  Students complete ***Chart R*** for independent practice. | | | | | |
| **Closing/Summarizing Strategy:** Students will complete a journal entry in their math journals, reflecting on what new things they learned during today and the previous day’s lessons.  Examples of prompting questions for math journals :  “What did you like most/least?”  “How could this have been more helpful to you?”  “What was most difficult? Why?”  “What connections did you make between new vocabulary and previous known terms?”….etc. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| * Have students practice reading **aloud,** large- numbers with decimal values. (#’s from the lesson) * Have students order **sprinter** results from their group work, in ascending order; and descending order. | | | * Reduce the number of problems in independent practice. * Work in a small group setting with teacher. * Provide *graph paper* to work on for students needing visual organization. | | | •Abbreviated form of task provided after the original task if needed.  Writing to Learn: After key points in the unit (after each task?), have students write in a journal using the following sequence:  •Record: state what they have learned  •Compare: Students pair up and compare what they have written and clarify.  •Revise: Based on the interaction, students create a more developed and polished version of their statements.  •Combine: Students collaborate to mesh their summaries  •Review: Students use previous entries to prepare and guide them through subsequent tasks.  • (Adapted from “Writing to Learn” by Robert Marzano in Educational Leadership, February 2012.) |
| **Assessment(s):**  Informal assessments will be completed during guided practice by monitoring and observing student interactions and journal entries. | | | | | | |
| **Teacher Reflection:** (Next steps?)   * What went well? * How can I improve? * How can increase time on task/rigor? * Were there any holes in the lesson? * Which things did students struggle the most with? * What were their successes? * What students need remediation? | | | | | | |

Figure E

***Chart R***

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| Pictorial form | Standard Form  (Base ten numerals) | Word Form  (Number Name) | Expanded Form |
|  | 2.63 | Two and sixty-three hundredths | 2 x 1 + 6 x (1/10) + 3 x (1/100) |
|  | **3.425** |  |  |
|  |  | **Two and sixteen hundredths.** |  |
|  |  |  | **4x1+2 x (1/10)+5 x (1/1000)** |
|  |  |  |  |